

Claims

1. A method of doing business including the steps of:
  - receiving at least one job to be processed from at least one customer;
  - estimating a time for completion of processing for said at least one job to be processed;
  - placing each of said at least one job to be processed in a queue of jobs to be processed;
  - sorting said queue of jobs to be processed;
  - configuring dynamically the size of at least one cluster of processing resources from a pool of processing resources responsive to at least one attribute of said job to be processed;
  - processing said at least one job to be processed from said queue of jobs to be processed by assigning said at least one job to be processed to said at least one cluster of processing resources; and
  - making a result of said processing of said at least one job to be processed available to said at least one customer.

1           2.     A method of claim 1, wherein said receiving further includes at least one  
2     attribute specific to said at least one job to be processed including at least one of the fol-  
3     lowing attributes: (1) priority of processing, (2) type of processing, and (3) a tolerance  
4     time.

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6           3.     A method as in claim 2, wherein said step of sorting said queue of jobs to  
7     be processed includes consideration of said request for priority of processing of said at  
8     least one job to be processed.

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10          4.     A method of claim 2, wherein said tolerance time includes a time for com-  
11     pletion acceptable to said at least one customer that is later in time than the estimated time  
12     for completion.

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14          5.     A method as in claim 4, wherein said step of sorting said queue of jobs to  
15     be processed includes consideration of said tolerance time attributed to said at least one  
16     job to be processed.

1           6.     A method as in claim 1, wherein the step of estimating a time for comple-  
2     tion of processing of said at least one job to be processed further includes the step of con-  
3     firming said time for completion of processing with said at least one customer.

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5           7.     A method as in claim 1 wherein said step of configuring dynamically a pool  
6     of processing resources into at least one cluster of processing resources responsive to at  
7     least one attribute of said at least job to be processed further includes the steps of:

8                     saving said cluster of processing resources from said pool of proc-  
9     essing resources as they become available such that they are earmarked for creating a spe-  
10    cific cluster to be used for processing said at least one job to be processed;

11                    saving a configuration file on said cluster of processing resources;  
12    and

13                    rebooting said cluster of processing resources to configure dynami-  
14    cally said cluster of processing resources for processing of said at least one job to be  
15    processed.

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17           8.     A method as in claim 1, wherein said making a result of said processing of  
18     said at least one job to be processed available to said at least one customer further in-  
19     cludes charging a fee for said result.

1           9.     A method as in claim 8, wherein said fee is based on said time for comple-  
2     tion of processing for said at least one job to be processed.

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4           10.    An apparatus including  
5                   means for receiving at least one job to be processed from at least one cus-  
6     tomer;

7                   means for estimating a time for completion of processing for said at least  
8     one job to be processed;

9                   means for placing each of said at least one job to be processed in a queue of  
10    jobs to be processed;

11                  means for sorting said queue of jobs to be processed;

12                  means for configuring dynamically the size of at least one cluster of proc-  
13    essing resources from a pool of processing resources responsive to at least one attribute of  
14    said job to be processed;

15                  means for processing said at least one job to be processed from said queue  
16    of jobs to be processed by assigning said at least one job to be processed to said at least  
17    one cluster of processing resources; and

1 means for making a result of said processing of said at least one job to be  
2 processed available to said at least one customer.

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4 11. An apparatus of claim 10, wherein said means for receiving further in-  
5 cludes at least one attribute specific to said at least one job to be processed including at  
6 least one of the following attributes: (1) priority of processing, (2) type of processing, and  
7 (3) a tolerance time.

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9 12. An apparatus as in claim 11 wherein said means for sorting said queue of  
10 jobs to be processed includes consideration of said request for priority of processing of  
11 said at least one job to be processed.

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13 13. An apparatus of claim 11, wherein said tolerance time includes a time for  
14 completion acceptable to said at least one customer that is later in time than the estimated  
15 time for completion.

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17 14. An apparatus as in claim 13, wherein means for sorting said queue of jobs  
18 to be processed includes consideration of said tolerance time attributed to said at least one  
19 job to be processed.

1           15.    An apparatus as in claim 10, wherein said means for estimating a time for  
2 completion of processing of said at least one job to be processed further includes means  
3 for confirming said time for completion of processing with said at least one customer.

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5           16.    An apparatus as in claim 10 wherein said means for configuring dynami-  
6 cally a pool of processing resources into at least one cluster of processing resources re-  
7 sponsive to at least one attribute of said job to be processed further includes:

8                       means for saving said cluster of processing resources from said pool  
9 of processing resources as they become available such that they are earmarked for creat-  
10 ing a specific cluster to be used for processing said job to be processed;

11                    means for saving a configuration file on said cluster of processing  
12 resources; and

13                    means for rebooting said cluster of processing resources to configure  
14 dynamically said cluster of processing resources for processing of said at least one job to  
15 be processed.

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17           17.    An apparatus as in claim 10, wherein said means for making a result of said  
18 processing of said at least one job to be processed available to said at least one customer  
19 further includes means for charging a fee for said result.

1           18.    An apparatus as in claim 17, wherein said fee is based on said time for  
2 completion of processing for said at least one job to be processed.

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4           19.    A processor readable medium  
5                    said medium encoded with a data structure stored to a set of processing  
6 nodes and capable upon reboot of said set of processing nodes of configuring said set of  
7 processing nodes into a processing collective.

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9           20.    A system including  
10                   a request receiver element configured to receive at least one job to be processed  
11 from at least one customer, said request receiver element in communication with a pool of  
12 processing resources;

13                   a queue of jobs to be processed and disposed to being sorted according to a pri-  
14 ority assigned to each of said at least one job to be processed, said queue of jobs to be  
15 processed being in communication with said pool of processing resources; and

16                   a pool of processing resources configured to run at least one job to be proc-  
17 essed, said pool of processing resources and disposed to being dynamically divided into  
18 clusters of processing resources which may run in parallel.

1           21.    A system as in claim 20, wherein said receiver element further includes at  
2   least one attribute specific to said at least one job to be processed including at least one of  
3   the following attributes: (1) priority of processing, (2) type of processing, and (3) a toler-  
4   ance time.

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6           22.    A system as in claim 21, wherein said queue of jobs to be processed may be  
7   sorted based on consideration of said request for priority of processing of said at least one  
8   job to be processed.

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10          23.    A system as in claim 21, wherein said tolerance time includes a time later  
11   than an estimated time for completion of said at least one job to be processed.

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13          24.    A system as in claim 23, wherein said queue of jobs to be processed are  
14   sorted based on consideration of said tolerance time attributed to said at least one job to  
15   be processed.

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17          25.    A system as in claim 20, wherein said pool of processing resources are dis-  
18   posed to being dynamically divided into clusters of processing resources which may run



1 in parallel is responsive to at least one attribute of said at least one job to be processed,  
2 and further include

3 a procuring element disposed to collect processing resources from said pool of  
4 processing resources as they become available such that they are earmarked for creating a  
5 specific cluster to be used for processing said at least one job to be processed;

6 an initializing element disposed to save a configuration file on said cluster of proc-  
7 essing resources;

8 a rebooting element disposed to soft reboot said cluster of processing resources  
9 such that said cluster of processing resources is dynamically created;

10 an executing element configured to run said at least one job to be processed on  
11 said cluster of programming resources; and

12 a transfer element disposed to deliver a result of said run of said at least one job to  
13 be processed to said at least one customer.

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15 26. A system as in claim 25, wherein a billing element charges said at least one  
16 customer a fee for said delivery of said result.

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1           27.   A system as in claim 26, wherein said billing element determines said fee  
2 based on at least one of said attributes attributed to said at least one job to be processed.

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4           28.   A memory storing information including instructions executable by a proc-  
5 essor to perform a method for dynamically configuring a pool of processing resources  
6 into clusters of processing resources which may be run in parallel, said instructions in-  
7 cluding

8                   determining a number of said processing resources to be clustered;

9                   identifying said processing resources to be clustered as they become avail-  
10                  able;

11                  forcing said processing resources, as identified, to initialize forming a clus-  
12                  ter; and

13                  processing a job to completion such that a result is generated and delivered  
14 to a customer.